

Amendments to the Claims

This listing of claims is the same as previously but is being provided here as a courtesy:

Listing of Claims:

Claim 1 (previously presented): A chill roll for a web printing press comprising:
a cylindrical drum; and
a porous layer disposed at a circumference of the drum and configured to provide a pathway for air from a first location between the chill roll and a web passing over the chill roll and a second location having a lower air pressure;
the drum defining a coolant inlet and a coolant outlet for circulating a coolant through an interior space in the drum, the interior space being separate from the pathway for the air.

Claim 2 (original): The chill roll as recited in claim 1 wherein the porous layer is attached to a circumferential surface of the drum.

Claim 3 (original): The chill roll as recited in claim 1 wherein the porous layer is integral with a circumferential surface of the drum.

Claim 4 (original): The chill roll as recited in claim 1 wherein the porous layer forms a circumferential surface of the drum.

Claim 5 (original): The chill roll as recited in claim 1 wherein the pathway is configured to enable the air to move in a radial direction.

Claim 6 (original): The chill roll as recited in claim 5 wherein the pathway is further configured to enable the air to move in at least one of a lateral and a circumferential direction.

Claim 7 (original): The chill roll as recited in claim 1 wherein the porous layer includes a matrix of material.

Claim 8 (original): The chill roll as recited in claim 1 wherein the porous layer includes a fibrous material.

Claim 9 (original): The chill roll as recited in claim 1 wherein the porous layer includes a foamed material.

Claim 10 (original): The chill roll as recited in claim 1 wherein the porous layer defines at least one of a hole, a slot and a tube so as to provide the pathway.

Claim 11 (original): The chill roll as recited in claim 1 wherein the porous layer includes a material having a high thermal conductivity.

Claim 12 (original): The chill roll as recited in claim 11 wherein the porous layer includes at least one of steel, aluminum and copper.

Claim 13 (original): The chill roll as recited in claim 1 wherein the porous layer has a thickness of from about 1 mm to about 2.5 mm.

Claim 14 (original): The chill roll as recited in claim 1 wherein the second location is at a lateral edge of the drum.

Claim 15 (original): The chill roll as recited in claim 1 wherein the air is entrained at the first location.

Claim 16 (original): The chill roll as recited in claim 1 wherein the pathway is configured to enable the air to move from the first location so as to improve a heat transfer between the web and the chill roll.

Claim 17 (canceled).

Claim 18 (previously presented): A web printing press comprising a cylindrical chill roll including a porous layer disposed at a circumference of the chill roll and configured to provide a pathway for air from a first location between the chill roll and a web passing over the chill roll and a second location having a lower air pressure, the chill roll having a circuit for circulating coolant, the circuit being separate from the pathway for the air.

Claim 19 (original): The web printing press as recited in claim 18 wherein the pathway is configured to enable the air to move from the first location so as to improve a heat transfer between the web and the chill roll.

Claim 20 (original): The web printing press as recited in claim 18 wherein the pathway is configured to enable the air to move in a radial direction and in at least one of a lateral and a circumferential direction.

Claim 21 (previously presented): A web printing press comprising:

a web; and

a cylindrical chill roll including a porous layer disposed at a circumference of the chill roll and configured to provide a pathway for air from a first location between the chill roll and the web passing over the chill roll and a second location having a lower air pressure, the chill roll having a circuit for circulating coolant, the web being inked and heated before contact with the chill roll.

Claim 22 (previously presented): The chill roll as recited in claim 2 wherein the porous layer defines the entire circumferential surface of the drum.